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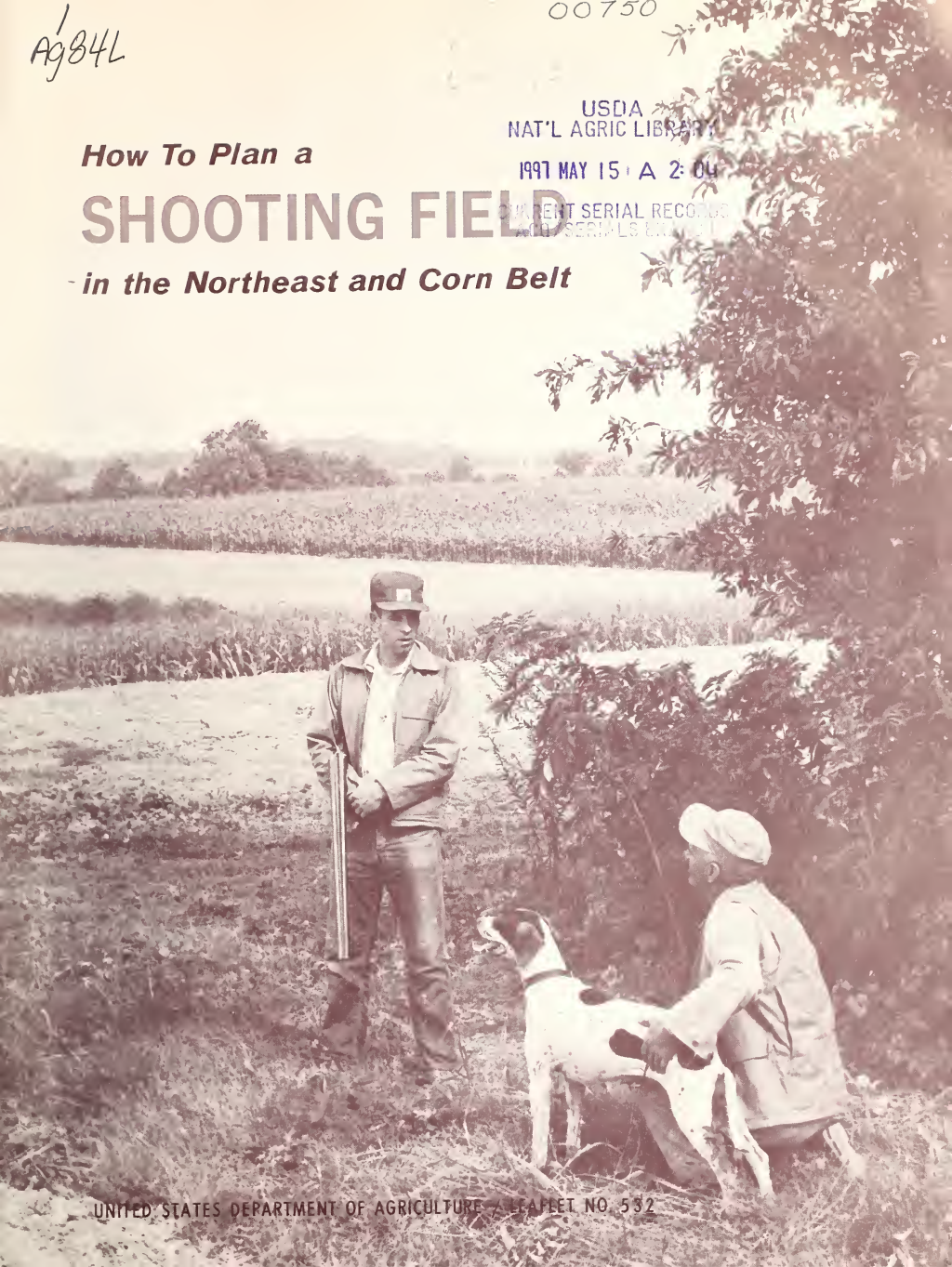
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*How To Plan a*

# SHOOTING FIELD

*- in the Northeast and Corn Belt*



## *How To Plan a* **SHOOTING FIELD** *in the Northeast and Corn Belt*



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A SHOOTING PRESERVE provides sportsmen the opportunity of hunting pen-raised upland game birds. In a good shooting preserve a hunter can take the number of birds he wants in about 2 hours. An essential feature of a shooting preserve is the shooting field where the birds are released shortly before the hunt. Most preserves have several such fields.

A well-planned shooting field holds released birds within the field and gives them little chance for escape to other areas. It also provides a pleasant landscape and furnishes hunters good, safe shooting without strenuous effort.

The best site for a shooting field is an open area of 25 to 75 acres with level to gentle slopes and fertile soil. Cover plants for upland game birds are essential but food plants are of little importance.

### *What You Have To Work With*

First take a good look at the field you are planning to develop. Some of the things to consider are kinds of soil, climate, lay of the land, present use, and kinds of plants on the field. You may decide to use the field only for shooting, or you may want to use it for crop and forage production as well as shooting.

The soils you have will influence your selection of cover plants and also how you plant and manage them. Soils vary in texture, depth, fertility, moisture-holding capacity, natural drainage, and susceptibility to erosion.

Climate also affects your choice of plants. The frost-free growing season varies from north to south and at different elevations. Some plants are better

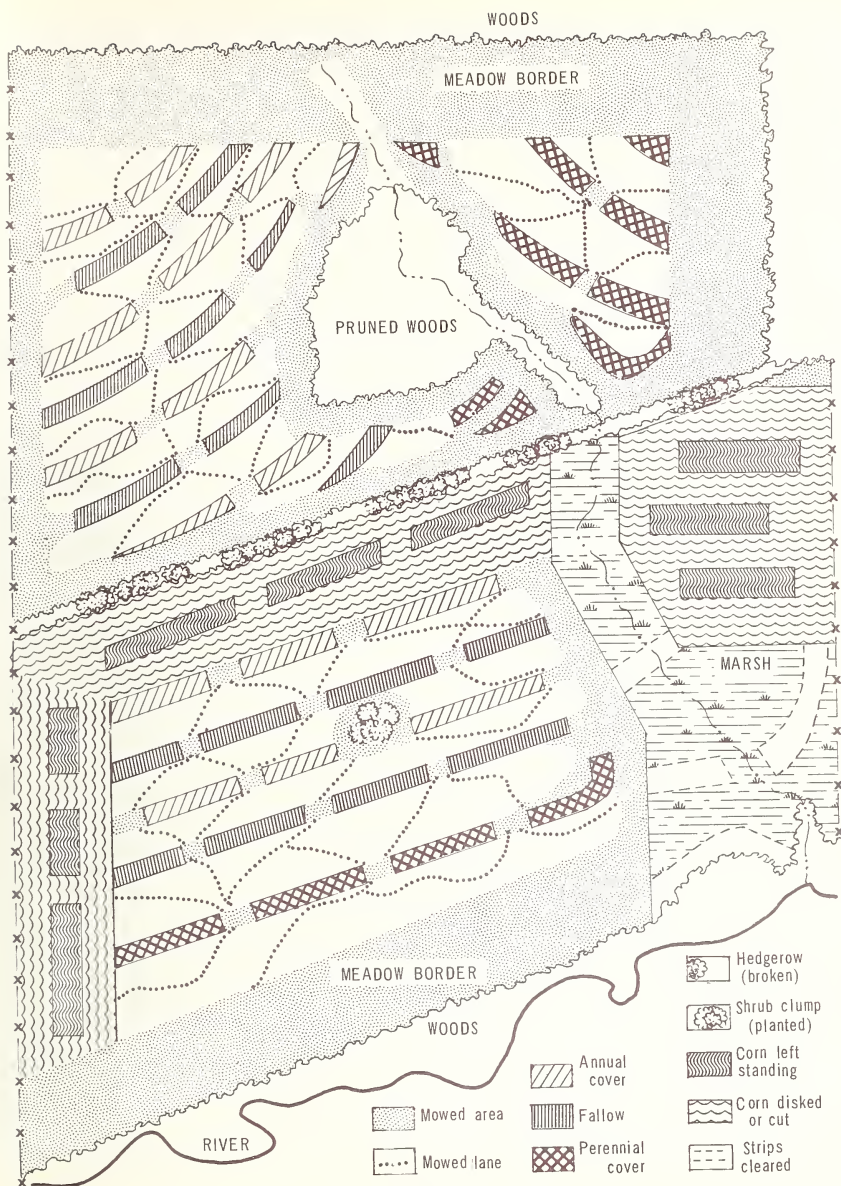
suited than others to the climate in your area. Snow may be of little importance in some areas. But in areas of heavy snowfall you need plants that stand up well under snow.

The lay of your land affects the pattern of the plant cover. On sloping land, plantings need to be made in strips across the slope, sometimes on the contour. Such a pattern is needed to control erosion as well as to make walking easier for the hunter. Since flushed game birds tend to fly downhill, cover plants should be grown on the lower slopes of the field to bring these birds to ground quickly.

Within the field it may be necessary to remove or break up the existing plant cover. Cropland and pasture are fairly easy to convert to shooting fields. Brushland is more difficult and woodland even more so. Wooded groves and bordering woodland may require severe pruning and undergrowth removal to permit access by dogs and hunters and to prevent birds from hiding and escaping. Continuous hedgerows allow birds to run long distances so you may need to break the rows at 150-foot intervals and at the point where they connect with other cover. Keep scattered weedy patches, small clumps of shrubs, and all meadow plants. Good management of existing vegetation is important.

Your present and future land use plans are important considerations in a shooting-field layout. If you expect to use the tract for shooting only, you will want to plan a layout mainly around perennial plants. These, in the long run, are the least expensive. If you intend to harvest crops and forage, you will want to plan a cropping system of annual plants.





Plan for 50-acre shooting field.



Winter shows field strip pattern on sloping land of a shooting preserve.

NY-895

### *The Shooting-Field Layout*

Domestic meadow grasses form the base vegetation of the best shooting field, although wild grasses and weeds of medium height also will serve. The base vegetation should cover 60 to 75 percent of a shooting field. When such cover is not already there, plant grasses. You can use almost any locally adapted hay plants. You do not need hay mixtures of grasses and legumes unless you plan to harvest forage.

Up to 20 percent of the field should be in tall cover plants. For shooting only, switchgrass on dry sites and reed canarygrass on moist ones—both perennials—are recommended. *Sericea lespedeza* is fairly good. If you want annuals, sudangrass is best, followed by black amber sorghum, sorghum-sudan hybrids, combine sorghum and corn, in about that order. Other annuals sometimes used are millets, soybeans, and buckwheat.

When you grow corn or other crops for harvest, the percentage of meadow cover will be reduced. Therefore, when you remove the crop, leave occasional standing strips or clumps. There should be little or no other standing crops by hunting season.

A crop rotation is desirable when annual plants are grown. When grown for shooting cover only, a 6-year rotation is suggested, with crops 1 year, fallow 1 year, and meadow 4 years; or crops 1 year and meadow 5 years, if the weeds that come with fallow prove



NH-170

Corn cleared along the woods cuts bird losses.

undesirable. Every sixth year replant the crop. By using a strip pattern of planting, you can have the same proportion of annual cover on the field year after year. You may need a shorter rotation if you plan to harvest annual crops on the shooting field.

Tall cover, such as switchgrass or sudangrass, is planted in strips 30 to 50 feet wide; sericea in strips not more than 20 feet wide. On sloping land these cover strips should be across the slope. To halt running birds you need stop strips—30- to 50-foot gaps at 100- to 200-foot intervals. These gaps provide the hunter with a shot when the birds flush. You can make them either by annual mowing across the cover strip or by leaving gaps when planting.

Woody cover provides release spots for game birds and furnishes them emergency shelter during severe weather. Ordinarily, you should not have more than 10 percent of the field in natural woody cover, preferably in narrow bands or small clumps. This may mean considerable clearing if the field is overgrown with brush. You may, on the other hand, find it desirable to plant shrubs on 2 to 5 percent of the field when it does not have suitable native shrub cover. It is a good idea to have shrubs, whether natural or planted, well out in the field to encourage flushed birds to alight within the area. Wide spacing of

planted shrubs fosters dense low cover.

Shooting-preserve operations vary with operators and their clientele. For those who want to harvest the maximum number of released birds, a strip of meadow or harvested crop plants completed around the field edge is desirable. This strip should be at least 50 feet wide and may be 100 feet at places where birds can escape and get lost in neighboring cover. Keep the plants in these borders very low during the shooting season.

### *Management Aids*

Mow meadow areas in your shooting field about 3 weeks before the hunting season. This permits some regrowth of grass and a more pleasant appearance. Later on, borders and stop strips may need additional mowing. In wild grass and weeds a meandering mowed strip is better than clean cutting for it helps conceal the hunter from the bird and the bird from the hunter until flushed.

On fairly level land, tall cover strips can be planted in a fish-hook curve near field edges to turn running birds back toward the interior of the shooting field.

An 18-inch chicken-wire fence with deflectors along the edge of escape areas such as woods turns the birds in toward the field and prevents their escape.



Pruning and clearing in small woodlots reduce game bird escapes.

NY-994





OH-45,717

Sudangrass is the best and most widely adapted of the annual cover plants for a shooting field.

## Plants and Planting Suggestions

The following plants are recommended for shooting fields in the Northeast and Corn Belt. Row planting of the starred ones sometimes encourages undesirable running by pheasants. Cross-row drilling or broadcast plantings at the ends of strips may help prevent running.

### Sudangrass\*

This is the best and most widely adapted of the annual cover plants. Planting in 14- to 21-inch rows is best. Closer spacing or broadcasting produces shorter, weaker plants. Wider spacing produces taller, stiffer plants that may lodge badly.

### Sorghums\*

Black amber sorghum is similar to sudangrass but is less resistant to snow damage. Twenty-one-inch rows or solid drilling is recommended. Combine sorghums provide good fall cover but lose their leaves and break over with wet snows. Drilling at double the normal seeding rates, with heavy fertilization, is recommended.

### Corn\*

The principal value of corn on the shooting field is for appearance. It is very expensive to grow and provides poor winter cover after snowfall. When used, plant short or dwarf varieties in 20-inch rows.



OH-60,713

Alternating strips of sorghum and millet give tall and short cover on a shooting preserve.





OH-45,718

Small patches of natural cover are preserved for release points.

### Millets

Proso, Japanese, and foxtail millets provide quick cover, but they do not stand up well under trampling and snow. They are often planted broadcast between corn rows at the time of last cultivation. Millets are also useful when you want a small food supply to hold birds in the field.

### Buckwheat

The principal value of buckwheat is to provide an alternative to mowing. Buckwheat flattens with the first fall frost and may be used to interrupt cover strips and stop running pheasants and other game birds.

### Soybeans

Since soybeans wilt with fall frosts, they serve as stop strips. Except for this use they contribute little to the shooting field.

### Grasses

Domestic grasses generally provide the base plants for the shooting field. Annual or perennial cover plants make up a small percentage within this base. A single kind of grass is all that is needed but most of the pasture- or hay-plant mixtures in local use will do.

### Fallow plants

The wild grasses and herbs that grow naturally on uncultivated land often provide good shooting cover.



NJ-40,473

Switchgrass provides excellent long-term cover for game birds.

These may be allowed to come in on strips following annual cover as a part of cropping systems.

### Switchgrass\*

The best perennial grass cover for a shooting field is switchgrass. Seed of this grass is commercially available. The grass grows from 2 to 6 feet tall and



NY-996

Winter cover tests show that sudangrass stands up better than sorghum under heavy snow.

is long-lived. It stands up well in snow. Thirty-six-inch row plantings and annual cultivation and fertilization between the rows are recommended. Two years are required to get a satisfactory stand, but switchgrass provides economical and durable cover.

### **Reed canarygrass\***

On wet soils reed canarygrass serves about as well as switchgrass. Planting and management recommendations are the same.

### **Sericea lespedeza**

Spring drill sericea lespedeza in 18-inch rows or broadcast and cover to one-half inch. Plant at the rate of 15 to 30 pounds per acre. Sericea needs to be clipped 4 to 6 weeks before the hunting season, otherwise the woody stems are rough on the dogs.

### **Shrubs**

Yews and mugho pines are good coniferous shrubs for shooting fields. Forsythia, dwarf willow, and aromatic sumac show promise as low, deciduous shrubs. Autumn olive and multiflora rose are used as taller shrubs. The latter, however, may spread badly where unmanaged pasture is nearby.

### ***Where To Get Help***

Soil Conservation Service personnel assigned to soil conservation districts help landowners decide how best to use their soils, plan shooting field layouts, select suitable plants and crop rotations, control erosion, and establish and maintain soil conservation practices.

Washington, D.C.

If you are a district cooperater you can get this help through your local soil conservation district.

Your local county agricultural agent can usually direct you to sources of help in planning your shooting field layout. He may have publications and information on plant sources and plant growing.

You may be able to get financial help through the Agricultural Stabilization and Conservation Service for cropland retirement under the cropland-conversion program and cost sharing on conservation-practice installation under the Agricultural Conservation Program. This help is available through the local Agricultural Stabilization and Conservation Committees when the conditions and regulations for financial aid can be met by the landowner.

Supervised credit for financing a shooting preserve may be obtained from the USDA's Farmers Home Administration (FHA) if the applicant is unable to obtain needed credit from normal sources at reasonable rates and terms.

FHA loans are available to develop land and water resources, to purchase land, equipment, and game birds, to construct or repair buildings, and to pay necessary operating expenses. The shooting preserve must be an income-producing enterprise and the borrower must obtain a substantial part of his income from farming. The farming operation and the proposed preserve can't be larger than a family-farm operation. In other words the farmer and his family must do most of the work.

Information about FHA loans for financing shooting preserves or other farm based recreation facilities may be obtained from any FHA county office.

In some States the technicians of the fish and game agency furnish technical help to shooting-preserve operators. Private organizations also furnish operators with advice and guidance.

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